

WE CLAIM:

## CLAIMS

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1. A method for reducing the effects of spurious frequencies in a wireless communications device, the method comprising:  
providing a plurality of selectable passband ranges for the wireless communications device;

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selecting one of the passband frequency ranges;  
determining a clock frequency that produces no substantial spurious signals in the selected passband frequency range;  
adjusting a clock to generate a clock signal at the clock frequency; and,

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driving a processor with the clock signal.

2. The method of claim 1 further comprising:

providing a cellular passband frequency range and a PCS passband frequency range.

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3. A method for avoiding spurious frequencies in the transceiver passband of a wireless communications device, the method comprising:

generating a clock signal at a clock frequency, the clock signal having a plurality of harmonics, each harmonic having a harmonic frequency;

generating a transceiver carrier signal at a carrier frequency;  
and,

selecting the clock frequency so that none of the harmonic  
frequencies is substantially equal to the carrier frequency.

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4. The method of claim 3 wherein generating a  
transceiver carrier signal at a carrier frequency includes generating a  
transceiver carrier signal having a center frequency of approximately 900  
megahertz (MHz);

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the method further comprising:

initially generating a clock signal at a frequency of 19.2  
megahertz (MHz) with a 46<sup>th</sup> harmonic at 883.2 MHz; and,

wherein selecting the clock frequency so that none of the  
harmonic frequencies is substantially equal to the carrier frequency

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includes increasing the clock frequency from 19.2 MHz to 26.24 MHz.

5. A method for reducing the effects of clock harmonics in  
the passband of a wireless communications device, the method  
comprising:

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generating a clock signal at a clock frequency, the clock  
signal having a plurality of harmonics, each harmonic having a harmonic  
frequency;

generating a transceiver carrier signal at a carrier frequency;

and,

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changing the clock frequency so that none of the harmonic  
frequencies is substantially equal to the carrier frequency.

6. A method for reducing the effects of clock harmonics in the passband of a wireless communications device, the method comprising:

5 generating a microprocessor clock signal at a clock frequency, the clock signal having a plurality of harmonics, each harmonic having a harmonic frequency;

generating a transceiver carrier signal at a carrier frequency, wherein the clock frequency is not substantially equal to any of the

10 harmonic frequencies;

changing the carrier frequency to a second carrier frequency, wherein the second carrier frequency is to be substantially equal to one of the harmonic frequencies; and

15 changing the microprocessor clock frequency to a new clock frequency wherein the new clock frequency does not have any harmonic frequencies that are substantially equal to the new carrier frequency.

7. A system for reducing the effects of spurious frequencies in a wireless communications device, the system comprising:

20 a microprocessor having a reference frequency input;

a clock having an output connected to the microprocessor input, and an input for selecting clock frequencies;

a transceiver having a port to transceive a plurality of selectable communication passbands in response to selection commands  
25 received at an input; and,

wherein the clock frequency is selected to avoid harmonic frequencies in the transceiver passband.